OIPE

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   3 <110> APPLICANT: Takara Shuzo Co., Ltd.
   5 <120> TITLE OF INVENTION: DNA POLYMERASES WITH ENHANCED LENGTH OF PRIMER EXTENSION
   7 <130> FILE REFERENCE: TKR2050.1
C--> 9 <140> CURRENT APPLICATION NUMBER: US/09/981,002
C--> 9 <141> CURRENT FILING DATE: 2001-10-17
   9 <150> PRIOR APPLICATION NUMBER: US 08/021,623
  10 <151> PRIOR FILING DATE: 1993-02-19
  12 <150> PRIOR APPLICATION NUMBER: US 08/483,535
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  15 <150> PRIOR APPLICATION NUMBER: US 08/931,818
  16 <151> PRIOR FILING DATE: 1997-09-16
  18 <160> NUMBER OF SEQ ID NOS: 29
  20 <170> SOFTWARE: PatentIn version 3.0
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86 1               5                   10                  15
88 gag gag gcc ccc tgg ccc ccg ccg gaa ggg gcc ttc gtg ggc ttt gtg       96
89 Glu Glu Ala Pro Trp Pro Pro Pro Glu Gly Ala Phe Val Gly Phe Val
90              20                  25                  30
92 ctt tcc cgc aag gag ccc atg tgg gcc gat ctt ctg gcc ctg gcc gcc      144
93 Leu Ser Arg Lys Glu Pro Met Trp Ala Asp Leu Leu Ala Leu Ala Ala
94          35                  40                  45
96 gcc agg ggg ggc cgg gtc cac cgg gcc ccc gag cct tat aaa gcc ctc      192
97 Ala Arg Gly Gly Arg Val His Arg Ala Pro Glu Pro Tyr Lys Ala Leu
98      50                  55                  60
100 agg gac ctg aag gag gcg cgg ggg ctt ctc gcc aaa gac ctg agc gtt      240
101 Arg Asp Leu Lys Glu Ala Arg Gly Leu Leu Ala Lys Asp Leu Ser Val
102 65                  70                  75                  80
104 ctg gcc ctg agg gaa ggc ctt ggc ctc ccg ccc ggc gac gac ccc atg      288
105 Leu Ala Leu Arg Glu Gly Leu Gly Leu Pro Pro Gly Asp Asp Pro Met
106                 85                  90                  95
108 ctc ctc gcc tac ctc ctg gac cct tcc aac acc acc ccc gag ggg gtg      336
109 Leu Leu Ala Tyr Leu Leu Asp Pro Ser Asn Thr Thr Pro Glu Gly Val
110                 100                 105                 110
112 gcc cgg cgc tac ggc ggg gag tgg acg gag gag gcg ggg gag cgg gcc      384
113 Ala Arg Arg Tyr Gly Gly Glu Trp Thr Glu Glu Ala Gly Glu Arg Ala
114             115                 120                 125
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117 Ala Leu Ser Glu Arg Leu Phe Ala Asn Leu Trp Gly Arg Leu Glu Gly
118      130                 135                 140
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121 Glu Glu Arg Leu Leu Trp Leu Tyr Arg Glu Val Glu Arg Pro Leu Ser
122 145                 150                 155                 160
124 gct gtc ctg gcc cac atg gag gcc acg ggg gtg cgc ctg gac gtg gcc      528
125 Ala Val Leu Ala His Met Glu Ala Thr Gly Val Arg Leu Asp Val Ala
126                 165                 170                 175
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129 Tyr Leu Arg Ala Leu Ser Leu Glu Val Ala Glu Glu Ile Ala Arg Leu
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PATENT APPLICATION: US/09/981,002   TIME: 15:37:53

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134            195            200            205
136 cgg gac cag ctg gaa agg gtc ctc ttt gac gag cta ggg ctt ccc gcc      672
137 Arg Asp Gln Leu Glu Arg Val Leu Phe Asp Glu Leu Gly Leu Pro Ala
138        210            215            220
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141 Ile Gly Lys Thr Glu Lys Thr Gly Lys Arg Ser Thr Ser Ala Ala Val
142 225            230            235            240
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146            245            250            255
148 tac cgg gag ctc acc aag ctg aag agc acc tac att gac ccc ttg ccg      816
149 Tyr Arg Glu Leu Thr Lys Leu Lys Ser Thr Tyr Ile Asp Pro Leu Pro
150            260            265            270
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153 Asp Leu Ile His Pro Arg Thr Gly Arg Leu His Thr Arg Phe Asn Gln
154        275            280            285
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157 Thr Ala Thr Ala Thr Gly Arg Leu Ser Ser Ser Asp Pro Asn Leu Gln
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161 Asn Ile Pro Val Arg Thr Pro Leu Gly Gln Arg Ile Arg Arg Ala Phe
162 305            310            315            320
164 atc gcc gag gag ggg tgg cta ttg gtg gcc ctg gac tat agc cag ata     1008
165 Ile Ala Glu Glu Gly Trp Leu Leu Val Ala Leu Asp Tyr Ser Gln Ile
166            325            330            335
168 gag ctc agg gtg ctg gcc cac ctc tcc ggc gac gag aac ctg atc cgg     1056
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176 ttc ggc gtc ccc cgg gag gcc gtg gac ccc ctg atg cgc cgg gcg gcc     1152
177 Phe Gly Val Pro Arg Glu Ala Val Asp Pro Leu Met Arg Arg Ala Ala
178        370            375            380
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181 Lys Thr Ile Asn Phe Gly Val Leu Tyr Gly Met Ser Ala His Arg Leu
182 385            390            395            400
184 tcc cag gag cta gcc atc cct tac gag gag gcc cag gcc ttc att gag     1248
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186            405            410            415
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